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EXAMINER	
WILLIAMS, LAWRENCE B	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/798,762	COSTANTINI, FRANK A.	
	Examiner	Art Unit	
	Lawrence B. Williams	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3/13/2008 have been fully considered but they are not persuasive. Applicant argues that Kennedy et al. do not determine whether the far end modem is a commercial or secure modem. The examiner respectfully disagrees. As applicant has noted, Kennedy discloses a normal call setup operation between two secure modems and discloses the modems involved built according to the FSVS (Future Secure Voice System)-210 (pg. 11, lines 34-37). Since this is a normal call set-up for a secure modem, the P1800 (ANS_{am}) response tone is expected. Thus once this P1800 Hz tone is received, normal call set-up operations begins. The examiner reiterates that since the P1800 Hz tone is expected for the normal secure call set-up, and the receiving modem acknowledges this P1800 Hz tone before beginning the secure call set-up, the receiving modem inherently determines that the sending modem is a secure modem from the P1800 Hz tone. One of ordinary skill in the art could have easily applied the teachings as a method of distinguishing a secure modem, since the scenario has already been used in a normal setup operation of a secure modem.

Applicant also argues that Brent et al. do not disclose a determining step. The examiner respectfully disagrees. As applicant has admitted, Brent et al. disclose that an 1800 Hz tone met with a 600 Hz and 3000 Hz response tone may be used to indicate a V.32 modem (commercial) connection. Since Brent discloses this scenario as a normal setup operation of a commercial modem, it is quit obvious and inherent that the response from the 1800 Hz tone indicates a commercial modem. One of ordinary skill in the art could have easily applied the teachings as a method of distinguishing a commercial modem, since the scenario has already been used in a

normal setup operation of a commercial modem. Therefore the rejections of claims 21-38 of the previous office action have been maintained.

Terminal Disclaimer

2. The terminal disclaimer filed on 3/13/2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent 6,768,771 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 21-22, 26, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent 6,549,587 B1) in view of Kennedy et al. (US Patent 5,903,603).

(1) With regard to claim 21, Li discloses in Fig. 24, a method for identifying a far-end modem type (col. 54, lines 44-46, 49-51), comprising: receiving a response signal (Remote ANS(am), AA, AC indications to call negotiator 502 shown as dotted line in Fig. 24) from a far-end modem in response to a transmitted V.8 ANS_{am} tone (LOCAL ANS(am), AA, AC indications from call negotiator 502); and determining from the response signal whether the far-end modem is a commercial modem (col. 54, line 49-col. 55, line 5; Li discloses determining a particular standard (V.22, V.32bis, V.34, V.90, etc., all known in the art as commercial modems)

of the modems. Li does not however teach determining from the response signal whether the far-end modem is a secure modem.

However, Kennedy et al. teaches establishing a secure communication channel between two (STU) secure telephone units (col. 1, lines 22-29) wherein a remote modem responds to a 2100 Hz (It is known in the art that a 2100 Hz tone is used as a V.8 ANS_{am} tone) during establishment of the secure channel (col. 2, lines 44- 55). Since establishment of a secure communication channel is the objective, it would be inherent that the response would signify a secure telephone/modem capability. Kennedy et al. also discloses the modems involved built according to the FSVS (Future Secure voice System) -210 (pg. 11, lines 34-37).

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Kennedy et al. as a method of establishing a secure communication channel.

(2) With regard to claim 22, Li also discloses the method of claim 21, wherein determining whether the far-end modem is a commercial modem or a secure modem comprises determining whether the far-end modem is a V.series modem (col. 5, lines 3-4)

Li does not determine whether the modem is a future secure voice system modem. However, Kennedy et al. discloses determining whether the far end modem is a future secure modem. Kennedy et al. discloses the modems involved built according to the FSVS (Future Secure voice System) -210 (pg. 11, lines 34-37).

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Kennedy et al. as a method of establishing a secure communication channel.

(3) With regard to claim 26, Kennedy et al. also discloses determining whether the response signal includes phase shifts; and if the response signal includes phase shifts,

determining that the far-end modem is a secure modem. Kennedy et al. teaches establishing a secure communication channel between (STU) secure telephone units (col. 1, lines 22-28) wherein a remote modem transmits as a response signal, a P1800 (Pseudo 1800) Hz signal corresponding to +45 and -45 degree phase shifts (col. 2, lines 51-59). Kennedy et al. also discloses the modems involved built according to the FSVS (Future Secure Voice System) -210 (pg. 11, lines 34-37). Thus the responding STU would be recognized as a secure modem.

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Kennedy et al. as a training procedure between two secure communication systems (col. 1, lines 5-12).

(4) With regard to claim 37, claim 37 discloses the method of claim 21 implemented via computer readable medium with computer executable instructions. Li also discloses his invention can be implemented by a software embodiment which would inherently include a computer readable medium with computer executable instructions.

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent 6,549,587 B1) in view of Kennedy et al. (US Patent 5,903,603) as applied to claim 22 above, and further in view of Chen et al. (US Patent 6,560,321 B1).

Claim 23 inherits all limitations of claim 22 above. As noted above, the combination of Li and Kennedy et al. disclose all limitations of claim 22 above. They do not disclose determining whether the response signal is a V.CM tone; if the response signal is a V.8 CM tone, determining that the far-end modem is a V.8 modem.

However, Chen et al. teaches determining whether a response signal is a V.CM tone; if the response signal is a V.8 CM tone (Chen et al. teaches the Rn/Rp distinguishable from a conventional V.8 CM signal), determining that the far-end modem is a V.8 modem (Chen et al. teaches the V.8 CM signal typically transmitted in response to an ANS_{am} signal is known as part of a conventional V.8 procedure (col. 9, lines 21-25; lines 44-52) inherently implying a V.8 modem).

One skilled in the art could have easily incorporated the teachings of Chen et al. into the invention of Li as a method of determining a responding modem's capabilities.

6. Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent 6,549,587 B1) in view of Kennedy et al. (US Patent 5,903,603) as applied to claim 21 above, and further in view of Scott (US Patent 5,349,635).

(1) With regard to claim 24. Claim 24 inherits all limitations of claim 21 above. As noted above, the combination of Li and Kennedy et al. disclose all limitations of claim 21. Furthermore Kennedy et al. also teaches determining whether the response signal has a nominal frequency of about 1800 Hz, and if the response signal has a nominal frequency of about 1800 Hz, determining from the response signal whether the far-end modem is or a secure modem (col. 2, lines 55-59). Since establishment of a secure communication channel is the objective, it would be inherent that the response would signify a secure telephone/modem capability. Kennedy et al. also discloses the modems involved built according to the FSVS (Future Secure Voice System) - 210 (pg. 11, lines 34-37).

The teachings of Li and Kennedy et al. do not however teach determining from the response signal if the far-end modem is a V.32 modem.

However, Scott teaches in Fig. 5, detecting an 1800 Hz V.32 signal AA (515) in response to a transmitted signal and then switching to a V.32 mode of operation (520, 525; col. 3, lines 60-64) inherently signifying a V.32 modem.

One skilled in the art could have easily incorporated the teachings of Scott and would have been motivated to do to detect modem capabilities of a responding modem.

(2) With regard to claim 25, Scott also discloses determining whether the response signal includes phase shifts (col. 3, lines 49-51); and if the response signal does not include phase shifts, determining that the far-end modem is a V.32 modem (col. 3, lines 60-64). Scott discloses detecting a V.32 answering tone at 2100 Hz with phase reversals (phase shifts) conforming to CCITT V.32 standards. Scott also discloses detecting an 1800 Hz signal which is a pan of the V.32 call establishment. Since Scott discloses both the 2100 Hz with phase reversals and the 1800 Hz signal (no phase reversals) conforming toV.32 standards, it is inherent that the 1800 Hz, without phase reversals signifies a V.32 modem capability.

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Scott (V.32 standards) as a method of identifying a modem type.

7. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent 6,549,587 B1) in view of Kennedy et al. (US Patent 5,903,603) as applied to claim 21 above, and further in view of Dimolitsas et al. (US Patent 5,963,621).

(1) With regard to claim 27, claim 27 inherits all limitations of claim 21, above. As noted above, the combination of Li and Kennedy et al. disclose all limitations of claim 21. They do not however disclose determining from the response signal, an operational mode of the far-end modem.

However, Dimolitsas et al. discloses a secure communication system wherein he teaches a responder modem (secure terminal) responding with a P1800 Hz signal with no phase reversals used to indicate an interoperable mode and a P1800 Hz with phase reversals to indicate an alternate mode of operation for the secure responder terminal (col. 20, lines 20-31).

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Dimolitsas et al. as a method of signifying operational modes of the modems as used by Dimolitsas et al.

(2) With regard to claim 28, Dimolitsas et al. also discloses determining whether the response signal includes phase reversals; and if the response signal includes phase reversals, determining that the far-end modem is a future secure voice system modem in alternate mode (col. 20, lines 20-31; col. 5, lines 18-29).

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Dimolitsas et al. as a method of distinguishing operational modes of the modems as used by Dimolitsas et al.

8. Claims 29, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent 6,549,587 B1) in view of Kennedy et al. (US Patent 5,903,603) and Dimolitsas et al. (US

Patent 5,963,621) as applied to claim 27 above, and further in view of Mihm, Jr. (US Patent 5,003,593).

(1) With regard to claim 29, claim 29 inherits all limitations of claim 27 above. As noted above, the combination of Li, Kennedy et al. and Dimolitsas et al. disclose all limitations of claim 27. They do not however disclose wherein determining the operational mode of the far-end modem comprises: determining whether the response signal includes a 128 dibit gap; and if the response signal includes a 128 dibit gap, determining that the far-end modem is a future secure voice system modem in half-duplex mode.

However, Mihm, Jr. discloses a teleconferencing method for a secure key management system wherein he teaches a half-duplex communications mode (col. 2, lines 33-34) between secure terminals (col. 2, lines 18-20). Mihm, Jr. also teaches a terminal transmitting an access domain message in half-duplex to conferenced terminals by transmitting P1800 data, stopping transmitting for 256 bits and then continuing transmitting P1800 data (col. 3, lines 1-13). The stopping for 256 bits is equivalent to applicant's claimed 128 dibit gap, since a dibit is defined as any one of four patterns from two consecutive bits which in this case Mihm, Jr.'s stopping transmitting for 256 bits is equivalent to applicant's 128 dibit gap.

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Mihm, Jr. as a method of simply identifying a half –duplex mode of operation between secure terminals as Mihm, Jr. has taught.

(2) With regard to claim 30, Dimolitsas et al. discloses that a P1800 Hz tone without phase reversals from a responder is used to indicate an interoperable mode of operation (col. 20,

lines 21-25), which would inherently imply the ability to determine whether the response signal includes phase reversals and also discloses the P1800 Hz tone being transmitted without a gap in signal energy (col. 16, lines 2-4), also inherently implying that a gap could be detected. Thus the invention of Dimolitsas et al. has the ability to determine whether the response signal includes phase reversals and a 128 dibit gap and determine that the far-end modem is a future secure modem (col. 5, lines 18-29).

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Dimolitsas et al. as a method of initiating a secure communication system in an operable mode of operation as used by Dimolitsas et al.

9. Claims 31-35, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimolitsas et al. (US Patent 5,963,621) in view of Brent et al. (US Patent 6,788,651 B1).

(1) With regard to claim 31, Dimolitsas et al. discloses a method for determining a far-end modem type, comprising: receiving a response signal (col. 20, lines 33-37) from a far-end modem in response to a transmitted P1800 Hz tone (col. 20, lines 27-31) with phase reversals; and determining from the response signal whether the far-end modem is a secure modem. It would be obvious that the response signifies the responder capable of secure communications (secure modem) since Dimolitsas et al. discloses this procedure as part of the Secure Terminals Protocols (col. 20, Secure Terminal Protocols, lines 9-52). Dimolitsas et al. does no disclose determining from the response signal whether the far-end modem is a commercial modem.

However, Brent et al. discloses a pair of 600 Hz and 3000Hz tones being transmitted in response to a 1800 Hz tone being used to indicate that a V.32 (commercial modem) modem

connection is starting to take place between two corresponding terminals (col. 6, lines 45-63, specifically, lines 51-56). It is inherent that the 600 and 3000 Hz response tones signify a V.32 (commercial modem).

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Brent et al. as a method of providing auto-mode detection between terminals.

(2) With regard to claim 32, claim 32 inherits all limitations of claim 31 above. As noted in the rejection of claim 31, Dimolitsas et al. discloses determining from the response signal whether the far-end modem is a secure modem. Brent et al. also discloses determining that the far-end modem is a V.32 modem (col. 6, lines 51-56).

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Brent et al. as a method of providing automode detection between terminals.

(3) With regard to claim 33, claim 33 inherits all limitations of claim 32, above. Furthermore Brent et al. also discloses determining whether the determining if the response signal includes a V.32 AC; and if the response signal includes a V.32 AC (V.32 AC is a pair of 600Hz and 3000 Hz tones, which are disclosed by Brent et al.), determining that the far-end modem is a V.32 mode (col. 6, lines 51-56).

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Brent et al. as a method of providing automode detection between terminals.

(4) With regard to claim 34, Dimolitsas et al. also discloses the method of claim 31, further comprising: determining whether the response signal includes a future secure voice system ("FSVS") Message A (col. 20, line 61-col. 21 line 14); and if the response signal includes an FSVS Message A, determining that the far-end modem is an FSVS modem in alternate

signaling mode (col. 22, lines 17-27). Dimolitsas et al. discloses detection of the message A (pertinent to an FSVS system) signal inherently implying applicant's first determination step and Dimolitsas et al. discloses a call setup in the alternate mode as a result of MSG A or MSG B.

(5) With regard to claim 35, claim 35 inherits all limitations of claim 31 above. As noted above, Brent et al. discloses whether the response signal includes a V.32 AC (pair of 600 Hz and 3000 Hz constitute a V.32 AC, col. 6, lines 51-56) and Dimolitsas et al. teaches determining whether the response signal includes a future secure voice system ("FSVS") Message A. Furthermore, Dimolitsas et al. also discloses determining that a far-end modem is an FSVS modem in interoperable mode with a response signal including neither a V.32 AC nor an FSVS Message A (col. 20, lines 21-25; col. 24, line 64-67).

(5) With regard to claim 38, claim 38 discloses the method of claim 31 implemented via computer readable medium with computer executable instructions. Dimolitsas et al. does not explictly teach a computer readable medium with computer readable instructions for performing the method. However, Dimolitsas et al. discloses the SIU (secure interface unit, Fig. 3, element 10, which performs the method) as a component of the DSP, 30. It would be obvious to one skilled in the art that the SIU method would be performed by executable instructions in the SIU.

10. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dimolitsas et al. (US Patent 5,963,621) in view of Brent et al. (US Patent 6,788,651 B1) as applied to claim 31 above, and further in view of Goldstein (US Patent 5,317,594).

Claim 36 inherits all limitations of claim 31 above. As noted above, the combination of Dimolitsas et al. and Brent et al. disclose all limitations of claim 31. Dimolitsas et al. also

discloses an alternate and interoperable mode of operation between secure terminals associated with a 2100 Hz tone (col. 27, lines 36-40). They do not disclose monitoring an incoming channel for energy at 2100 Hz; and if 2100 Hz energy is present in the incoming channel for at least about one second, then determining whether the far-end modem v.32 compliant commercial modem.

However, Goldstein teaches a method for identifying a modem in Fig. 4, wherein he teaches CCITT Recommendations for V.32 handshake, where he teaches the modem sending a an ANS tone of 2100 Hz for one or more seconds, and upon receipt a second modem replying (it would be inherent that the second modem would be monitoring the channel for at least one second to detect and response to the 2100 Hz energy). Since Goldstein teaches this procedure as CCITT Recommendations for V.32 handshake, it would be obvious that the second modem's response would signify a V.32 compliant modem.

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Goldstein as a method of identifying V.fast type modems (col. 1, lines 60-66).

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ghayour Mohammad can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence B. Williams

lbw
June 10, 2008

/Mohammad H Ghayour/

Supervisory Patent Examiner, Art Unit 2611